REC-ERC-82-12

CHARACTERISTICS AND APPLICATIONS OF BIG SANDY RIVER, GLENWOOD SPRINGS, AND DOTSERO SPRINGS WATERS IN ENERGY DEVELOPMENT

July 1982

Engineering and Research Center

U. S. Department of the Interior

Bureau of Reclamation

7-2090 (4-81)
Bureau of Reclamation

TECHNICAL REPORT STANDARD TITLE PAGE

1. REPORT NO. REC-ERC-82-12	2. GOVERNMENT ACCESSION NO.	3. RECIPIENT'S CATALOG NO.
4. TITLE AND SUBTITLE **Characteristics and Applications of Big Sandy River, Glenwood Springs, and Dotsero Springs Waters in Energy Development**		5. REPORT DATE July 1982
		6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) Roy J. Eisenhauer		8. PERFORMING ORGANIZATION REPORT NO. REC-ERC-82-12
9. PERFORMING ORGANIZATION NAME AND ADDRESS Bureau of Reclamation Engineering and Research Center Denver, Colorado 80225		10. WORK UNIT NO.
		11. CONTRACT OR GRANT NO.
12. SPONSORING AGENCY NAME AND ADDRESS Same		13. TYPE OF REPORT AND PERIOD COVERED
		14. SPONSORING AGENCY CODE DIBR

15. SUPPLEMENTARY NOTES

Microfiche and/or hard copy available at the E&R Center/Denver, Colorado Editor: RNW

16. ABSTRACT

Bureau of Reclamation is conducting studies to find methods for preventing high salinity point source waters from entering the Colorado River. There are three point sources that contribute a combined salt load of 344 700 metric tons per year. Big Sandy River contributes 117 900 metric tons per year, Glenwood Springs contribute 163 300 metric tons per year, and Dotsero Springs contribute 63 500 metric tons per year. Water analyses of the three saline point sources were made and the water was used in simulating coal slurry transport by pipeline. This study has confirmed some aspects of the proposed methods for disposal of these waters (deep well injection or by use in energy development). Methods for use of these waters in energy development include:

1. A pipeline coal transport media,
2. A secondary coolant in binary cooling towers, and
3. A brine supply for solar salt gradient ponds.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. *DESCRIPTORS--/* *water hardness/ calcium bicarbonate/ *calcium sulfate/ *saline water/ total dissolved solids/ salt load/ cooling towers/ *pipeline coal transport/ deep well injection/ solar salt gradient ponds

b. *IDENTIFIERS--/* Upper Colorado Region/ Big Sandy River Unit/ Colorado River Quality Improvement Program/ Glenwood-Dotsero Springs Unit/ Black Mesa Slurry Pipeline

c. *COSATI Field/Group* 07 *COWRR:* 0700 *SRIM:*

18. DISTRIBUTION STATEMENT *Available from the National Technical Information Service, Operations Division, 5285 Port Royal Road, Springfield, Virginia 22161.* (Microfiche and/or hard copy available from NTIS)	19. SECURITY CLASS (THIS REPORT) *UNCLASSIFIED*	21. NO. OF PAGES 27
	20. SECURITY CLASS (THIS PAGE) *UNCLASSIFIED*	22. PRICE